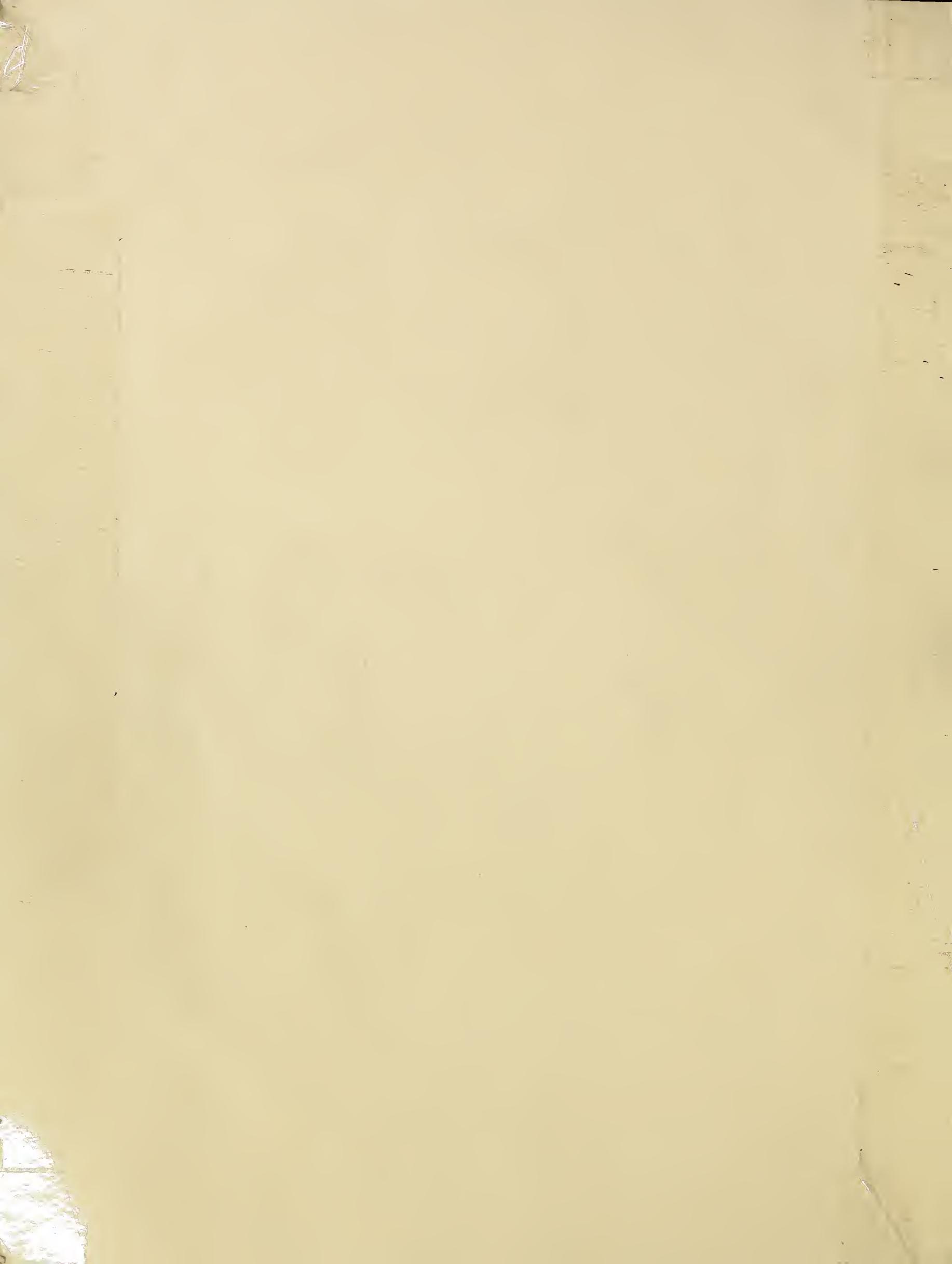


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# THE FARM INDEX

ECONOMIC RESEARCH SERVICE ■ U. S. DEPARTMENT OF AGRICULTURE ■ SEPTEMBER 1965

**promoting  
America's  
produce**

*also in this issue:*

REGISTERING 1964 RETURNS

FERTILIZER PAYS OFF—IF

GRADES FOR BEEF





# economic trends

ITEM	UNIT OR BASE PERIOD	'57-'59 AVERAGE	1964		1965		
			YEAR	JULY	MAY	JUNE	JULY
<b>Prices:</b>							
Prices received by farmers	1910-14 = 100	242	236	233	251	256	253
Crops	1910-14 = 100	223	238	233	248	243	236
Livestock and products	1910-14 = 100	258	235	234	254	266	269
Prices paid, interest, taxes and wage rates	1910-14 = 100	293	313	313	323	323	323
Family living items	1910-14 = 100	286	300	300	308	307	307
Production items	1910-14 = 100	262	270	269	278	278	278
Parity ratio		83	76	74	78	79	78
Wholesale prices, all commodities	1957-59 = 100	—	100.5	100.4	102.1	102.8	102.9
Commodities other than farm and food	1957-59 = 100	—	101.2	101.1	102.3	102.5	102.5
Farm products	1957-59 = 100	—	94.3	94.1	98.4	100.5	100.0
Food, processed	1957-59 = 100	—	101.0	101.2	103.3	106.1	106.7
Consumer price index, all items	1957-59 = 100	—	108.1	108.3	109.6	110.1	—
Food	1957-59 = 100	—	106.4	107.2	107.9	110.1	—
<b>Farm Food Market Basket:</b> <sup>1</sup>							
Retail cost	Dollars	983	1,015	1,023	1,030	1,063	—
Farm value	Dollars	388	373	381	412	424	—
Farm-retail spread	Dollars	595	642	642	618	639	—
Farmers' share of retail cost	Per cent	39	37	37	40	40	—
<b>Farm Income:</b>							
Volume of farm marketings	1957-59 = 100	—	118	114	187	105	111
Cash receipts from farm marketings	Million dollars	32,247	36,889	2,823	2,546	2,896	3,000
Crops	Million dollars	13,766	17,135	1,260	823	1,106	1,200
Livestock and products	Million dollars	18,481	19,764	1,563	1,723	1,790	1,800
Realized gross income <sup>2</sup>	Billion dollars	—	42.2	—	—	45.0	—
Farm production expenses <sup>2</sup>	Billion dollars	—	29.3	—	—	30.0	—
Realized net income <sup>2</sup>	Billion dollars	—	12.9	—	—	15.0	—
<b>Agricultural Trade:</b>							
Agricultural exports	Million dollars	4,105	6,347	480	333	531	—
Agricultural imports	Million dollars	3,977	4,082	317	339	345	—
<b>Land Values:</b>							
Average value per acre	1957-59 = 100	—	—	135	139 <sup>3</sup>	—	—
Total value of farm real estate	Billion dollars	—	—	154.9	159.4 <sup>3</sup>	—	—
<b>Gross National Product<sup>2</sup></b>							
Consumption <sup>2</sup>	Billion dollars	456.7	622.6	618.6	—	658.0	—
Investment <sup>2</sup>	Billion dollars	297.3	399.3	396.1	—	423.0	—
Government expenditures <sup>2</sup>	Billion dollars	65.1	87.7	87.2	—	94.3	—
Net exports <sup>2</sup>	Billion dollars	92.4	128.6	129.6	—	133.6	—
1.8	7.0	5.7	—	—	7.1	—	—
<b>Income and Spending:</b> <sup>4</sup>							
Personal income, annual rate	Billion dollars	365.3	495.0	496.1	525.3	528.8	536.6
Total retail sales, monthly rate	Million dollars	17,105	21,802	21,935	23,352	23,299	23,759
Retail sales of food group, monthly rate	Million dollars	4,159	5,183	5,261	5,405	5,480	—
<b>Employment and Wages:</b> <sup>4</sup>							
Total civilian employment	Millions	64.9	70.4	70.5	71.9	72.1	72.8
Agricultural	Millions	6.0	4.8	4.9	5.0	4.7	4.7
Rate of unemployment	Per cent	5.5	5.2	5.0	4.6	4.7	4.5
Workweek in manufacturing	Hours	39.8	40.7	40.6	41.1	41.0	41.0
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	2.53	2.53	2.61	2.62	2.62
<b>Industrial Production:</b> <sup>4</sup>							
1957-59 = 100	—	132	133	141	142	144	—
<b>Manufacturers' Shipments and Inventories:</b> <sup>4</sup>							
Total shipments, monthly rate	Million dollars	28,745	37,129	37,963	39,814	39,948	—
Total inventories, book value end of month	Million dollars	51,549	62,944	60,488	64,269	64,607	—
Total new orders, monthly rate	Million dollars	28,365	37,697	39,315	40,181	40,307	—

<sup>1</sup> Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1960-61—estimated monthly. <sup>2</sup> Annual rates seasonally adjusted second quarter. <sup>3</sup> As of March 1. <sup>4</sup> Seasonally adjusted.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Industry Survey, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

Wheat and surplus . . . two terms that have become so linked together during the past decade as to mean about the same thing to many people. But the linkage may prove tenuous because the trend of the past few years has been toward a definite shrinkage in wheat stocks.

True, the carryover exceeded 1 billion bushels in six of the past 10 years—roughly double annual domestic food use. However, after peaking in 1961, stocks began working down.

The reduction averaged about 150 million bushels a year, down to the 819 million bushels carried over on July 1, 1965. A further reduction is expected during the 1965/66 crop year.



These factors, which should have held back the gain in stocks, were offset by two other factors. A general increase in yield per acre more than made up for reduced acreage and output trended upward. Also, the increase in population failed to raise domestic use of wheat for food proportionately because consumption per person dropped. Thus, food use of wheat has stayed fairly stable at about 500 million bushels a year.

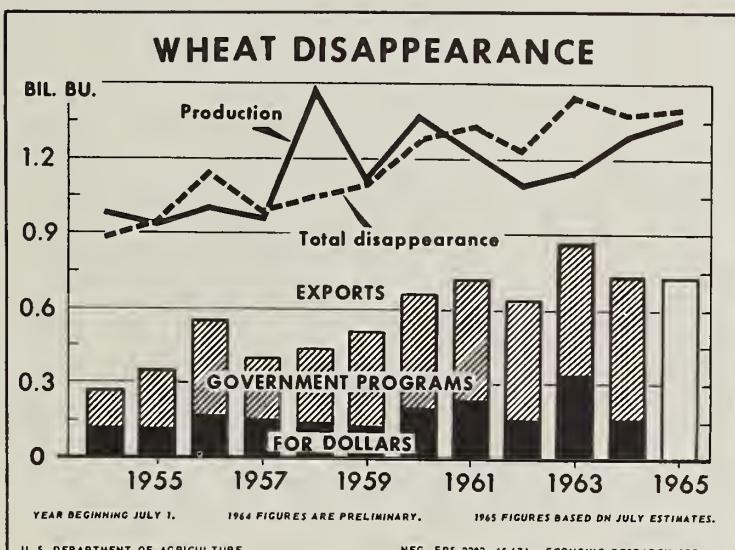
The supply situation has brightened in recent years, with reduction in surplus stocks bringing supply into closer balance with demand. Exports have gone up sharply. Domestic use has more than held its own. Production adjustment programs have further limited acreage.

Exports in 1963/64 reached an all-time high of 800 million bushels, nearly triple the level a decade earlier. Figures for 1964/65 show 730 million bushels—second highest on record. Export prospects for 1965/66 point to some increase in commercial exports and continued large Food For Peace shipments.

Commercial sales abroad make up one-fourth to one-third of total U.S. wheat exports. The government assists such dollar sales by supplying the difference between the domestic and world price. Large gains in recent years have occurred in wheat shipments under Food For Peace programs. These programs have also provided for sizable U.S. wheat donations for relief and economic development.

Domestic use the past decade has been fairly stable at around 600 million bushels a year. It went up to 644 million bushels in 1964/65 mainly because of increased use of wheat for feed. For the same reason, use in 1965/66 is expected to climb further.

Government programs have held wheat acreage for harvest below 50 million acres each year since 1961. Yields, however, have pushed upward—from 24 bushels per acre in 1961 to



Supplies built up nearly every year in the 1950s. In the late 1950s production exceeded disappearance and by July 1961 the carry-over stocks had reached a peak of 1.4 billion bushels.

The buildup occurred despite acreage-restricting government programs, the rapid growth in population and an increase in exports.

# the agricultural outlook

an estimated record high of 27.6 bushels this year. Output for 1965 was estimated at 1.4 billion bushels in August, up 7 per cent from last year.

Record or near-record wheat crops are expected in many Free World countries of the Northern Hemisphere. Production prospects are less promising elsewhere, including Russia and Communist China. Although the supply of wheat held by major competitors of the United States has not been heavy, much of it is being drained off by sales to communist countries, contributing to improved prospects for U.S. commercial exports.

Legislative authority for the government's domestic wheat program expired with the 1965 crop. Pending the outcome of new legislation, the Food and Agriculture Act of 1962 applies. Under its provisions, the Secretary of Agriculture has proclaimed marketing quotas which would be submitted to a producer referendum. Congress has specified that such a referendum would not be held until 30 days after adjournment of the current session.

#### Larger Cotton Carryover:

The August crop report indicates an upland cotton crop of 14,812,000 bales in 1965, only 200,000 bales below 1964 production (Upland accounts for nearly all U.S. cotton.) The large crop in prospect reflects record yields—525 pounds per acre indicated for 1965 compared with 517 last year.

Harvested acreage for the 1965 crop is expected to be down about 3 per cent from 1964 because more farmers this year chose to cut their acreage enough to receive incentive payments under the domestic allotment program.

The 1965 crop, plus small imports, is expected to exceed disappearance by more than 1 million bales. This means that carryover on August 1, 1966, will likely go well above the record 14.4 million bales of 1956.

#### Crop Yields Leap:

Improved growing weather this summer points to record-breaking crop production this year on an acreage for harvest only 2 per cent above 1962's all-time low. Offsetting much of

the effect of government programs to limit production—keeping 55 to 60 million acres out of crop use—are the prospects for record yields of several major crops.

The largest acreage yield ever obtained, for example, is expected to push all-wheat production to a near record.

A record-large feed grain crop is in prospect with unprecedented yields of corn, oats, grain sorghums and barley. Thus, the feed grain supply could slightly exceed expected use, interrupting at the end of the 1965/66 feeding year the general downward trend of the past several years in carryover stocks.

Soybean production is expected to be a fourth above last season. It will probably not be offset by the likely increase in domestic and export use. Thus, the carryover at the end of the 1965/66 year may rise to a more adequate level than the minimal carryover this fall.

#### Potato Prices Dropping:

Potato prices in mid-August were down fairly sharply after peaking a month earlier. Supplies during the period increased rapidly after being held down by weather-delayed harvest in leading early summer crop states. Mid-August prices in most areas were below those a year earlier.

Relatively heavy supplies are indicated into fall. Much of the September volume depends on the late summer crop; production is below average but 14 per cent above last year. More important, the fall crop is up an estimated 20 per cent and well above average.

#### Reduced Meat Output:

Meat production is down this year and livestock prices have been substantially above 1964 levels. Red meat production is expected to total 2.5 to 3 per cent below the 32.7 billion pounds in 1964.

Per capita consumption of all red meats likely will average around 168 to 169 pounds down six to seven pounds from the record level in 1964. Little change is indicated for beef but pork consumption probably will be down at least six pounds from the 65 pounds per capita last year. This reduction, together with the continued advance in the demand for meat, has resulted in the higher prices for livestock.

## 1964 NET INCOMES BELOW YEAR EARLIER FOR MANY COMMERCIAL FARMERS

Type of farm and location	Average net incomes		Index of net farm output		Index of prices received	
	1963	1964 <sup>1</sup>	1963	1964 <sup>1</sup>	1963	1964 <sup>1</sup>
Dollars		1957-59=100		1957-59=100		
Dairy farms:						
Central Northeast	4,101	4,178	123	126	95	95
Eastern Wisconsin:						
Grade A	6,005	6,541	122	127	98	100
Grade B	3,257	3,332	121	124	100	100
Western Wisconsin, Grade B	4,831	2,837	128	105	99	99
Dairy-hog farms, southeastern Minnesota	4,545	3,904	120	109	99	102
Egg producing farms, New Jersey	2,093	2,470	130	143	92	88
Broiler farms:						
Maine	3,665	3,692	114	118	111	109
Delmarva:						
Broilers	2,241	2,433	151	160	107	111
Broiler-crop	5,954	6,022	122	125	111	110
Georgia	803	718	112	114	88	86
Corn Belt farms:						
Hog-dairy <sup>2</sup>	7,274	7,663	117	122	95	95
Hog fattening-beef raising	3,953	4,395	128	143	98	101
Hog-beef fattening <sup>2</sup>	7,006	8,643	125	127	91	92
Cash grain	11,374	12,205	134	140	105	107
Cotton farms:						
Southern Piedmont	2,891	3,274	125	143	101	95
Mississippi Delta:						
Small	2,708	2,383	135	127	106	100
Large-scale	40,167	34,623	130	128	109	102
Texas:						
Black Prairie	5,302	4,668	144	146	107	100
High Plains (nonirrigated)	10,320	1,676	126	52	105	95
High Plains (irrigated)	17,507	12,903	118	109	105	97
San Joaquin Valley, California (irrigated)						
Cotton-specialty crop	23,723	58,290	106	109	97	126
Cotton-general crop (medium)	32,117	36,067	102	111	112	111
Cotton-general crop (large)	93,922	108,785	103	112	111	111
Peanut-cotton farms, Southern Coastal Plains	5,674	5,181	178	169	102	99
Tobacco farms:						
North Carolina Coastal Plain:						
Tobacco <sup>2</sup>	6,099	6,429	134	136	103	101
Tobacco-cotton <sup>2</sup>	6,385	6,362	138	139	103	101
Kentucky Bluegrass:						
Tobacco-livestock, inner area	9,786	6,530	136	113	96	90
Tobacco-dairy, intermediate area	3,448	2,678	128	110	99	99
Tobacco-dairy, outer area	6,288	5,323	139	130	97	97
Spring wheat farms:						
Northern Plains:						
Wheat-small grain-livestock	7,622	8,690	129	158	94	80
Wheat-corn-livestock	6,711	5,062	103	94	100	93
Wheat-fallow	9,073	7,567	183	193	102	82
Winter wheat farms:						
Southern Plains:						
Wheat	9,086	8,271	107	108	98	78
Wheat-grain sorghum	7,024	6,949	86	86	98	86
Pacific Northwest:						
Wheat-pea	17,408	15,190	117	128	104	82
Wheat-fallow	15,275	13,836	97	103	103	79
Cattle ranches:						
Northern Plains	7,385	6,043	118	120	101	88
Intermountain region	10,133	6,860	104	98	95	81
Southwest	5,272	1,310	102	101	95	78
Sheep ranches:						
Northern Plains	12,961	11,765	123	106	94	99
Utah-Nevada	13,261	14,631	101	99	93	99
Southwest	5,926	3,258	95	80	91	92

<sup>1</sup> Preliminary. <sup>2</sup> Revised.

Total net farm income (including changes in inventories) for all farms in the U.S. was \$12.7 billion in 1964, down 2 per cent from a year earlier. Net farm incomes were lower than in 1963 on slightly more than half of 42 important types of commercial farms, higher on 18 and the same for only one.

The big factors behind changes in 1964 net incomes were changes in farm production and in prices received for products sold. Net farm production last year ranged from 1 to 59 per cent below a year earlier on 16 types of farms and 1 to 22 per cent higher on 25 types. In most cases where 1964 incomes were up it was due to higher production than in 1963.

Average prices received last year were down from 1963 on more than half of the 42 types of farms surveyed and these price decreases were often substantial—from 10 to 23 per cent less than those in 1963. While prices rose on 10 types of farms, increases were usually nominal, from 1 to 6 per cent above 1963. Only on cotton-specialty crop farms in California was there a significant boost in prices received—up 30 per cent—due to higher prices for potatoes in 1964, an important source of income on these farms.

Changes in prices paid during 1964 for goods and services were only slight—from 8 per cent below to 4 per cent above those of 1963. On 17 and large, higher incomes last year were due to production increases; lower incomes could be attributed to lower output, lower prices or a combination of both. (1)

## Half Again a Given Farm Income? Management Makes the Difference

Two farmers farm side by side. They put in the same number of hours in the field. One makes a third to half again as much income as the other. What makes the difference? Management—and a willingness to keep up with innovations in technology.

A series of budgets for typical farms with well-drained clay and clay loam soils in the Coastal Prairie of Texas illustrates the case for good management. The net returns are an average of what the better managers could expect over a 10-year period. Farmers in the area can compare their present income per acre with these goals. Budgets were developed for four soil groups:

*Well-drained upland clay and clay loams (Fort Bend, Wharton, Matagorda, Brazoria Counties).* Gross returns per acre were: cotton, \$164.75 per year; grain sorghum, \$70.70; and corn, \$56.25. Net returns ran \$53.66, \$37.26 and \$20.45, respectively.

**DISC:** A common enough implement on most farms but the cost of keeping one around may not be so familiar. Figuring such costs is relatively simple. Make allowances for annual depreciation (tax figures are fine), repairs, shelter, insurance, taxes and interest. The total divided by the number of acres covered produces a cost per acre. This added to a charge for the size tractor used (from \$1.98 to \$2.76 an hour) gives an idea of the real cost of disking cropland. (See August 1965 Farm Index for tractor cost table.)

The figures in this table are averages of the replies to a 1960 survey of wheat farms in northeastern Colorado. Although costs probably are higher nowadays and are likely to be different from those for other farming areas, they illustrate the way such costs are estimated. (3)



Size in feet	12	14	16
Cost when new	\$706	\$864	\$989
Investment in 1960	\$388	\$475	\$544
Acres of use annually	188	495	438
<b>Annual fixed costs:</b>			
Depreciation <sup>1</sup>	\$31.77	\$64.80	\$63.58
Repairs	1.91	7.60	7.31
Shelter, insurance, taxes	8.02	9.60	10.85
Interest <sup>2</sup>	31.04	38.00	43.52
Total	\$72.74	\$120.00	\$125.26
Per acre	\$39	\$24	\$29
<b>Size of tractor in bottoms</b>			
4 or 5	4 or 5	4 or 5 or 6	4 or 5 or 6
<b>Hours per acre (multiply by tractor cost per hour)</b>			
0.18-0.16	0.16-0.15	0.14-0.13-0.10	0.14-0.13-0.10

<sup>1</sup> Cost when new less 10 per cent—remainder divided by estimated years of use. <sup>2</sup> Eight per cent.

## Cotton, Hogs and Corn Best Choices For Farm Enterprises in Alabama

(1) Plan production with an eye to what prices will be later. (2) Use the most up-to-date production practices. Both of these instructions will help a farmer to make the highest returns from his operation. This is the gist of the conclusions to a study of a typical 160-acre farm in the Limestone Valley area of Alabama.

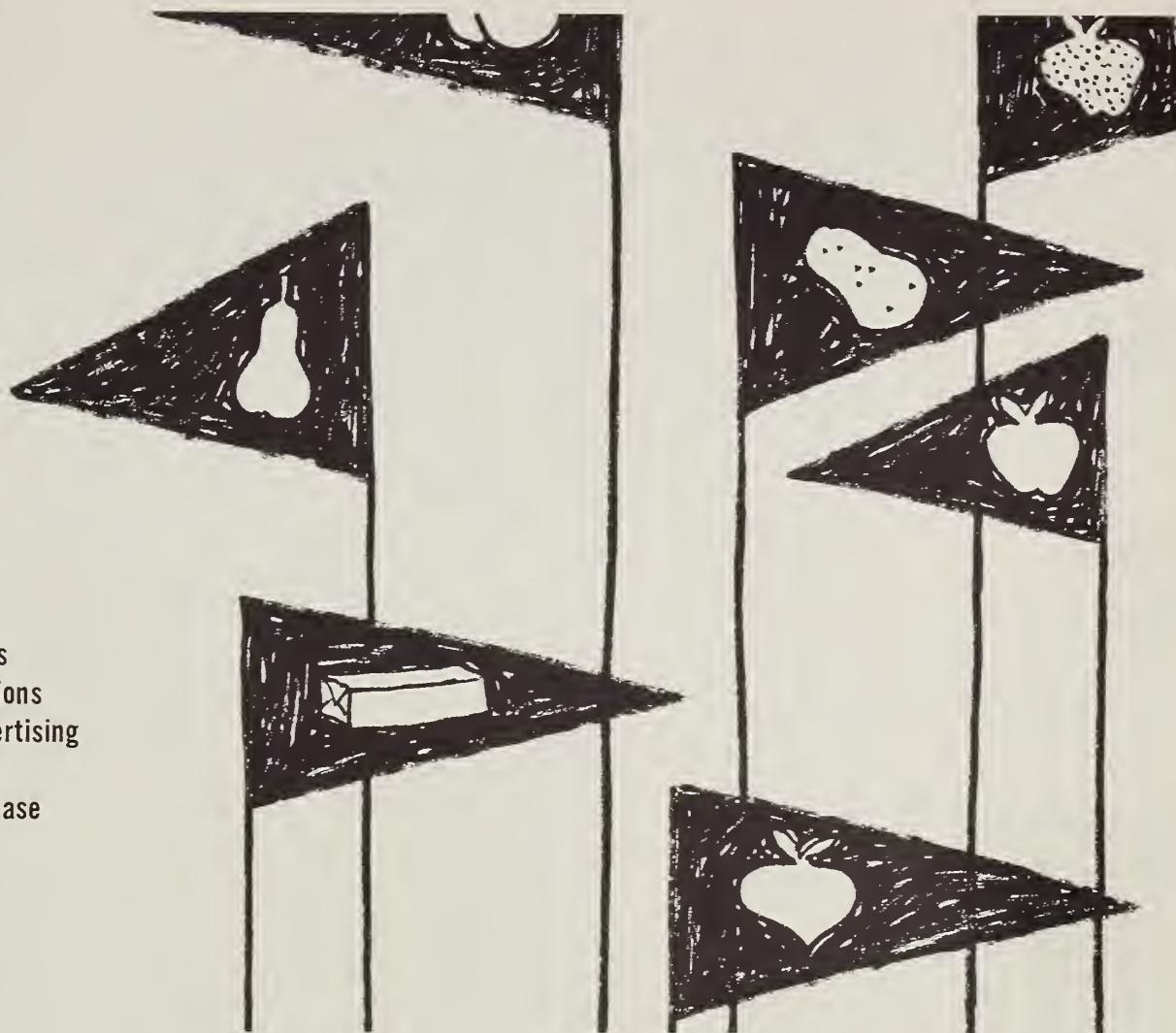
The study points out that farmers in the Limestone Valley area would make a higher return from their operations if they planted all of their cotton allotment (28.8 acres were assumed in the study) and used improved production practices when they figured on hog prices averaging less than \$17.50 per hundred-weight. If they had reason to expect hog prices to average higher than \$17.50, they would find it more profitable to reduce the cotton acreage and increase corn and hog output to the maximum that could be handled without hiring more labor.

On the other hand, if hog prices were expected to average less than \$14.40, planting skip-row cotton would help to bolster over-all returns. The additional land needed for the cotton would cut down the size of the corn and hog enterprises. Fattening steers was profitable only when fed cattle prices were high in relation to hog prices. Steers appear to be a logical alternative only where a farmer has far greater skills or preferences for steer production than hog production.

Changes in the major cash enterprises also resulted in shifts in land use. When the livestock operations were reduced in size, some of the land that was used for hay and pasture went into oats, wheat or other small grains. The permanent pasture was used only for steers. When they weren't profitable, it remained idle. (4)

# promoting America's produce

**Cost figures on promotion campaigns indicate farmers and their organizations spend nearly half the money on advertising programs, about a fifth of it on such merchandising aids as point-of-purchase displays, dealer contests.**



Farmers, working through various agencies, spent an estimated \$86 million to promote their goods in 1962 and planned to spend \$92 million in 1963. Nearly a third of the expenditures were to promote fruit.

The promotion programs were run by some 1,200 farmer cooperatives, commodity councils or boards, voluntary producer groups, state agencies and such. An additional 375 producer organizations helped pay for the campaigns.

The organizations spent anything from less than \$5,000 each to over \$1 million during the year.

The 1963 estimate for total promotion spending was up 7 per cent from the \$86 million spent in 1962 and 37 per cent above the 1958 level of \$67 million.

Biggest part of the total for 1963 was spent by voluntary producer-processor groups. Their promotion activities ran to about

\$33 million. Agricultural cooperatives spent another \$30 million.

Commissions and other commodity groups with some governmental authority spent an estimated \$26 million, a little less than in 1962.

State departments of agriculture also spent less on commodity promotion. Their expenditures were about \$1.57 million, \$66,000 less than in 1962.

About two out of every three promotion dollars were spent on national campaigns. Only about 12 per cent of the money went for regional programs. But 19 per cent of the funds were used on strictly local campaigns. The remaining 3 per cent paid for campaigns aimed at selected big cities.

About a fourth of the money spent on commodity promotion in 1962, the latest year for a breakdown on types of promotion spending, went into the effort to promote individual brands of food

and fiber. Cooperatives accounted for almost all the brand advertising and promotion.

On the other hand, the groups that invested in over-all commodity promotion accounted for more than half the total promotion funds. Commodity campaigns were largely the instruments of voluntary producer groups.

About 20 per cent of the funds went for campaigns to promote state or area commodities such as California fruit, Georgia peaches, Maine potatoes and the like.

Only 10 per cent of all the commodity groups spent \$100,000 to \$500,000 a year on promotion. But their campaigns accounted for more than 30 per cent of total promotion funds. About 1 per cent of all the groups spent \$1 million or more on promotion during the year.

The biggest expense was in advertising, accounting for 45 per cent of the promotion dollars in

1962. Merchandising aids such as point-of-purchase displays, dealer aids and dealer contests used up over 20 per cent of the promotion funds. Public relations and consumer education amounted to nearly 17 per cent of the total expenditures. The rest paid for administrative and miscellaneous expenses.

More money by far was spent promoting fresh and processed fruit than any other single commodity group. Promotion for fruit products amounted to over 34 per cent of the total in 1962. Dairy products came second with 27 per cent of the total.

Promotion expenditures for no other commodity group amounted to more than 7 per cent. (5)

## Not Leprechauns but Processing Gilts Image of Old Irish Friend

Dressed up as shoestrings, pancakes, chips, puffs or any other of the 50-odd products now on the market, the Irish potato has managed to change both its image and its marketing pattern.

First, potato chips and other processed items have added glamour to an old-time diet staple. Virtually single-handed, the processed group has halted the long-time decline in potato use per person.

Second, as their popularity grows, processed forms are changing the way potatoes are marketed. Whereas only 2 per cent of the 1940 crop went into processed products, the figure by 1963 had jumped to 29 per cent.

Processed forms can use small potatoes and secondary grades. Thus a full 80 per cent of the crop could be marketed for food in the early 1960s, compared with 73 per cent in the mid-1950s. (The other 20 per cent of the crop is used for seed, livestock feed and industrial products.)

Third, processed products have given rise to better use of the entire crop. Large potatoes are used

for french fries. Small potatoes, pieces, slivers and clean culls go into many frozen and dehydrated products. By turning out a number of different products the processor can operate more efficiently and, at the same time, hedge his operations against consumer changes in product preferences.

Since the food market is the highest-value market, the industry hopes that new food products can be developed to stimulate consumer demand for potatoes. In the meantime, the best alternative outlets for surplus and low-grade potatoes are the starch and livestock industries.

Despite the many varieties on today's market, ERS researchers point out that processed potato products sell most successfully in the institutional market—hotels, restaurants, hospitals and the like. While four-fifths of the nation's total food supply is sold through retail channels, only a third of the dehydrated mashed potatoes and 30 per cent of the frozen french fries are bought by consumers at the local food store. (6)

### What's New In Marketing Research

The Farm Index reserves this space for announcements of significant new projects to be undertaken by or for the Economic Research Service.

*Improving the Efficiency of Egg and Production-Input Marketing.* (In cooperation with the New Hampshire Agricultural Experiment Station.) This project will study costs and economies of scale in egg packing, feed mixing, hatchery operation, costs of assembling eggs and costs of distributing chicks and feed.

Least-cost combinations of these marketing and input-supplying functions will be developed under varying volume and density conditions.

The study is part of a broad analysis of egg marketing trends and problems in the Northeast. Estimated completion, mid-1967. (7)

## Food Stores, Restaurants Up Sales; Per Capita Eating Declines Somewhat

Americans collectively spent the annual equivalent of \$83.5 billion for food during the first half of this year. The estimate was 6 per cent above a year earlier.

With population growth slowed somewhat during the year preceding July 1, and per capita consumption of food down slightly, a large part of the increase in food expenditures was caused by higher retail food prices.

Retail food stores in January-May increased their sales 6 per cent above a year earlier; sales for restaurants, cafeterias and lunchrooms jumped 11 per cent.

Sales for candy, nut and confectionery stores spurred ahead of the previous year's level by 15 per cent. Also, eating and drinking places were ahead of a year earlier by 8 per cent.

On the other hand, meat markets, fruit stores, vegetable markets and delicatessens all registered lower sales, despite higher prices for food.

On a regional basis, food store sales for the first five months increased 8 per cent in the South but only 2 per cent in the North Central states.

The gain in food expenditures this year is not expected quite to match the increase expected for disposable income. Thus, there may be a small decline in the percentage of income spent for food—from the 18.5 per cent of income spent last year.

The total marketing bill as a share of disposable income has remained extremely stable over time, while the farm value of domestic foods has dropped significantly. Most of the decline since 1950 in the percentage of income spent for U.S. farm foods—from 20 per cent to an estimated 16 per cent this year—has come about as the result of the declining portion going to farmers. (8)

# FERTILIZER PAYS OFF... IF

The developing world could increase yields manyfold with fertilizer but farmers can't be expected to invest in it unless they anticipate a profit, which depends on interlocking economic, technical and social improvements.

The government of India recently distributed a new hybrid corn. It has a potential yield easily three to four times the actual yields currently being obtained from traditional varieties. But realization of this potential yield depends not only on fairly heavy dosages of fertilizer but also on such practices as new methods and rates of planting, use of insecticides and better water management. Failure to carry out any one of these steps severely restricts the yield.

In Mexico tests have been made with a disease-resistant variety of wheat. When the wheat was fertilized yields were increased more than three and a half times. But when fertilized and irrigated, crop yields were almost seven times greater.

But whether yields are three times greater or seven, it doesn't matter to the farmer unless he expects to profit from the use of the fertilizers and other improved practices.

**MORE FERTILIZER? ONLY IF IT PAYS:** It takes more than higher yields to make fertilizer pay off. Despite a 48 per cent increase in yields in part of Nigeria, for example, the net return was a minus figure during recent tests. That is, the cost per acre of fertilizer used was nearly \$7 more than the value

of the increased corn production—a 70-cent loss for every dollar invested in fertilizer. And if a farmer is without defense against nature's droughts, floods and the like, or if market prices are highly uncertain, even a higher return of \$1.60 or more may not be enough to induce farmers to fertilize.

To feed the world producers will need to vastly increase the use of fertilizer on farms. But the successful use of fertilizer depends on a host of economic, physical, technical and social factors.

The amount of fertilizer—if any—farmers may be expected to use will depend not only on expected yields but also on current prices for the crop, the cost of fertilizer, the amount of capital or credit available, conditions of land tenure and the amount or risk or uncertainty associated with farm production.

If a farmer, or a nation, had all the money needed to invest in fertilizers, there wouldn't be a problem. But few individual farmers operate without capital restrictions. The developing nations, by definition, have severely limited capital resources and a number of alternative needs, each pressing for use of available funds.

Policy makers must choose between more fertilizer, expanding irrigation facilities, extending the

Country:	Corn yields per acre from:		Corn yield increases per acre with fertilizer		Net return to fertilizer:		Output per pound of nutrients
	control plots	fertilized plots	Pounds	Per cent	Dollars	per acre	
						per dollar of fertilizer	
Ghana:							
Forest	1,042	1,307	265	25	4.45	2.20	12.0
Savannah	1,061	1,528	467	44	5.26	1.60	7.0
Morocco:							
Casablanca-Rabat	652	1,037	385	59	.40	1.00	3.8
Marrakech-Safi	645	1,016	371	58	2.43	1.50	6.2
Nigeria:							
Forest	211	312	101	48	— 6.88	.30	1.3
Savannah	568	765	197	35	— 5.26	.60	2.3
Turkey:							
Black Sea	1,268	2,086	818	65	11.74	1.60	5.1
Marmara-Aegean	1,668	2,462	794	48	10.93	1.60	5.0

These figures include only the application rates resulting in the largest additional return per acre. Other rates might have provided a higher yield or a larger output

per pound of fertilizer. The figures are derived from tests conducted by the U.N. Food and Agriculture Organization.

highway system or adding to the supply of improved seed and stock—to name but a few of the demands on their resources.

Even when supplies of fertilizer are available, the farmer or his government still has to decide how much fertilizer to apply to each crop.

When the yield response and possible returns are known, it may sometimes be to the advantage of the developing nation to concentrate on production of cash crops rather than basic food crops. Greater output of the cash crops could permit larger exports and add to the national income, increasing it by enough to more than offset the food that would have been produced.

Any such program would, of course, depend on conditions in world markets, availability of food grains for import and whether the marketing and distribution facilities exist to handle extra imports and exports.

Physical and economic conditions will also shape the farmer's willingness to invest in fertilizer. If prices generally are stable, he may invest fairly heavily. If he faces extreme price changes from year to year, he is bound to take a much more cautious approach to making the added investment.

And when natural hazards of weather are added to a particularly risky pricing structure, an investment in fertilizer will be minimum at best.

The farmer may know that he

can expect, in theory, \$5 back for every \$1 invested in fertilizer for a given crop. He may also know that the facts of the marketplace suggest that a \$3 return is far more realistic. The amount he spends on fertilizer will be cut accordingly.

In other words, the returns per unit of fertilizer for the farmer who operates in an unusually hazardous physical and economic climate must be even higher than they are in the United States if there is going to be any realistic inducement to invest in fertilizer.

Governments will have to tackle this problem of risk if the aim is rapid expansion in the use of fertilizer. Education can help to remove the uncertainty associated with an unfamiliar practice in a traditional agriculture. Flood control, drainage programs and irrigation projects help to offset hazards of perennially hostile weather.

Even this may not be enough to induce active participation in a program of crop fertilization if conditions of land tenure are at odds with such an investment.

For most countries the overriding need is for more food. And to get it the governments are taking many of the possible steps to improve the economic structure of the country or to sidestep current obstacles.

In Taiwan some free distribution of fertilizer in the past, along with other development activities, has stimulated rapid increases in

the use of fertilizer despite high prices. And in Pakistan government subsidies keep fertilizer prices down though the actual cost is high.

Product price also enters into the equation of profitable use of fertilizer. In Pakistan the relation of the price of rice to that of fertilizer is such that it is worthwhile to fertilize when each pound of nitrogen results in an extra 2.8 pounds of rice.

By contrast, with existing prices in Egypt the necessary yield response would have to be at least 16.5 pounds, or about two and a half times the average response level necessary in the United States.

But despite the problems, most of the underdeveloped countries face an urgent need to increase their agricultural output and greater use of fertilizer is a major means to this end.

Also, fertilizer offers another, less obvious advantage. It can be used as an object lesson in progress.

In the absence of experience with new and different production practices, farmers are understandably hesitant to abandon traditional ways. But the difference in growth and color of fertilized crops is seen quickly. So too, are the higher yields, greater profit when harvest comes.

As farmers become aware of these gains, they are all the more willing to try other improved methods. (9)

## Foreign Spotlight

**WORLD PRICES.** Led by international prices for sugar, wheat, wool tops and cocoa, world commodity prices have been declining for the past several months. For the first half of this year, they averaged 5 per cent lower than for the same period in 1964. The lowest point, reached in July, is around 10 per cent below the peak touched in November 1963 when inflated sugar prices caused the upward trend. The July prices, however, are

still well above the 1962 low. The figures are based on world commodity prices measured daily at United Kingdom international markets by the Reuters' index.

**EXPORTS TO EEC.** U.S. Agricultural exports to the European Economic Community were \$1,372 million in fiscal year 1965 (ended June 30), compared with \$1,333 million for a year earlier. A sharp rise in exports of feed grains offset declines in wheat and other products. (10)

## Old and New Irrigation Facilities Bring Water to Lebanese Farms

Lebanon's central Bekaa Valley, the granary of ancient Rome, is still in business today though the Mediterranean coastal plain is gaining in commercial importance.

Profitable fruit and vegetable crops are grown along the seacoast and the terraced slopes of the mountains. Citrus and apples from farms in this area are Lebanon's principal export crops. Fruits account for about 50 per cent of the country's agricultural exports. Wool, tobacco, dry beans and peas, and cotton are also important.

Neighboring Arab countries buy about half of these exports, which include most of the perishable fruits and vegetables. The United States and Russia are major buyers of wool and tobacco.

The United States, with mostly nonagricultural items, ranks second to the United Kingdom in exports to Lebanon. Even then we sell the Lebanese nearly eight times more products than we buy from them. Our major agricultural sales include wheat flour, animal feeds, nonfat dry milk and vegetable oil.

Though 80 per cent of the national income is derived from non-farm sources, Lebanese agriculture is crucial to the nation's foreign trade and yields some form of income to half the two million population.

About one-fourth the land in this Connecticut-size nation is devoted to crops. Most of the remainder is used for grazing sheep and goats.

Traces of Rome are in evidence in irrigation facilities still being used. The country has some 125,000 acres under irrigation. When the multistage Litani River Project is completed, 50,000 acres will have been added to the irrigation total. Then about a quarter of the country's farm land will be under irrigation.

### *Nothing Like a Tramp*

The term *tramp steamer* evokes a picture of small, rust-streaked freighters plowing the backwaters of the world. Actually, many tramps are modern merchant vessels. Some are as big as 18,000 tons, considerably more than the average size of merchant vessels, which is less than 11,000 tons.

Tramps are vitally important because they transport most of the world's grain. For example, in 1964 the U.S. and Canada together exported 50.3 million long tons of heavy grains. Of this amount, 31.6 million tons were shipped in tramp freighters. The tramps are "voyage-chartered" vessels. That is, unlike regularly scheduled liners, they are chartered by a shipper at negotiated rates for a specific voyage. (12)

Increased irrigation is particularly important to Lebanese agriculture because the nation has little or no unused land that is suitable to agricultural uses.

Aside from developing the nation's water resources, Beirut's efforts at agricultural development generally emphasize improved marketing and stepped-up research facilities. In 1964 the number of regional agricultural extension centers had reached 34 after 10 years in operation. (11)

### Kennedy Round, Future Size of EEC Hold Answers for U.S.-Europe Trade

The United States since 1946 has spent more than \$30 billion—the largest amount going to any one region—on economic aid to Europe.

The United Kingdom received \$7.7 billion; France, \$5.1 billion; West Germany, \$4.0 billion; Italy, \$3.8 billion; Yugoslavia, \$1.9 billion; and the Netherlands and Spain, \$1.2 billion each.

With this help, Europe's economic recovery from the devastation of World War II was rapid. Take West Germany, for instance.

While the gross national product of the United States grew 3.3 per cent a year during the 1950s, that of the German Republic climbed 7.5 per cent.

Today Europe takes over half of all U.S. farm exports sold for cash. Of worldwide sales of nearly \$4.6 billion in calendar 1964, Europe took \$2.5 billion or 54 per cent.

Thus, it is evident that up to now the U.S. investment in post-war economic aid has paid off in terms of trade.

However, ERS international economists see two clouds on the horizon, one immediate, the other more distant.

Most immediate is the uncertain fate of the Kennedy Round of negotiations among members of the General Agreement on Tariffs and Trade (GATT). We are negotiating for a substantial lowering of trade barriers in importing nations, particularly the European Economic Community. Success will provide a basis for optimistic forecasts of our agricultural exports to Europe. If we fail, much of our market will be imperiled.

On the far horizon is the uncertainty about the future size of the European Economic Community. Today there are six full members (France, West Germany, Italy, the Netherlands, Belgium and Luxembourg), two associates (Greece and Turkey) and 18 African affiliates (former French and Belgian colonies). Discussions with Austria and Nigeria are underway. In fact, at least 38 countries in Europe, Asia and Africa have asked for talks that could lead to membership, association or bilateral trade agreements with the EEC.

The U.S. could suffer major discrimination against a large part of its agricultural exports to the EEC if all present applicants got their requested preferences. Thus, our negotiations with the present EEC at GATT may eventually have an impact on U.S. trade with much of the world. (13)

*Jack Sprat (who could eat no fat) would be simply delighted to hear of a recent change in USDA's*

## GRADES FOR BEEF

Most consumers will not recognize any change in the familiar and dependable U.S. Choice and other federal grades of beef. However, in keeping with the Department's policy of using the results of the best research available to develop and revise grade standards, significant changes in the grade standards for beef were made on June 1, 1965.

On that day, the federal meat grading service was changed in two ways. First, the quality standards for beef were revised. Second, separate and optional cutability standards for beef were established.

The quality grades for beef have long been familiar to consumers in the "Prime," "Choice," "Good" or "Standard" grade labels on meat at the retail counters in a store.

These standards traditionally have required that meat from older animals have a greater degree of marbling to compensate for less palatability due to age. But according to recent research, the rates of increase in marbling required in relation to increases in maturity were greater than necessary. So the marbling standards have been eased, particularly for beef from more mature cattle—and beef of all four grades can now have slightly less marbling.

Separate from the quality standards are the new optional *yield* or *cutability* grade standards. The idea is to rate carcasses on the basis of how many closely trimmed retail cuts they will produce.

Now federal grades for beef will recognize both of the important factors determining value, quality and cutability. A carcass may now be graded for either quality, cutability or both.

Traditionally carcasses of the same grade and weight have brought nearly uniform prices despite wide variations in the amount of excess fat and muscling and, therefore, in the yield of retail cuts.

The new cutability standards will give the marketing system the means to establish price differentials based on yields of retail cuts. This should give cattlemen the necessary financial incentive to produce more of the high-quality, lean beef consumers prefer. Also, marketing costs will be lower as the production, shipping and trimming of waste fat are reduced. (11)

### Farmer's Share of Consumer's Dollar For Cotton Drops to 34 Cents in '64

Where does most of the consumer's cotton dollar go? Not to the farmer but to the people who transform bales of raw cotton into shirts and sheets in consumer shopping bags.

The farmer's share of the consumer's cotton dollar averaged only 14 cents in 1964. His share was 15 cents in 1962 and 1963 and 18 cents back in 1951 and 1952.

Twenty-five representative clothing and house furnishing items equivalent, on the average, to a pound of lint cotton cost an average of \$2.17 at retail in 1964, the same as in 1963. But the pound of cotton brought only 31 cents to the farmer in 1964, down from 32 cents in 1963 and 33 cents in 1962. So the farm-retail spread rose from \$1.85 in 1963 to \$1.86 in 1964. The average retail cost, \$2.17, divided into the farm value of the cotton, 31 cents, gives 14 per cent as the farmer's share of the consumer's cotton dollar.

The increase in the total marketing charge between 1962 and 1964 was mainly in manufacturing and distribution, not in the merchandising of raw cotton. Combined salaries and wages for manufacturing and distribution took 49 per cent of the consumer's cotton dollar in 1962; 44 per cent back in 1947. In 1964, labor costs from the manufacturer on through the retailer accounted for an even larger share, according to preliminary estimates. (12)

### Housing, Food, Clothing, Cars Use Up Four-Fifths of Farm Family Spending

The manager of the family finances sometimes can do a better job of planning with the help of a little history for background.

On the average, out of every dollar farm families spent in 1961, 25 cents and a fraction went for the house, its operation and its furnishings. It was nearly a penny more than they spent on food and beverages and twice as much as they spent on clothing, the third of the so-called basic expenses.

The cost of owning and operating a car ran to more money than the cost of clothing, however, with the farm families spending over 16 cents out of every dollar to purchase and operate automobiles and trucks.

These latest breakdowns for expenditures and income for the farm population are derived from a nationwide survey of consumer expenditures in 1961. The survey was a joint undertaking of the Department of Agriculture and the Department of Labor's Bureau of Labor Statistics. Reports on the survey have been prepared by the Consumer and Food Economics Research Division of the Agricultural Research Service.

In actual dollars, the families spent a total of \$3,594 for current expenses in 1961. In addition, they used \$220 for gifts and contributions, put \$200 into various

types of life insurance and retirement funds. They also had savings of \$519 through a net increase of assets over liabilities.

The average after-tax income for the farm families was \$4,424. Food and beverages took \$893 of their total expenditures. Housing cost \$917 and clothing ran to \$427.

The farm families spent \$588 during the year on the purchase and operation of trucks and automobiles. In addition, they spent \$25 on public transportation.

Medical care cost another \$310. The minor categories—personal care, recreation, reading and education, tobacco and miscellaneous expenditures—amounted to \$370.

The farm families spent about a fourth more for current consumption in 1961 than they did in 1955. The increase in real consumption, however, was only about half that amount when the rise in prices is subtracted.

Housing became the biggest expense for the farm families during the 1955-61 period. With larger over-all spending, the share of the budget going for food and beverages dropped from 29 to 25 per cent, while housing rose from 24 to 26 per cent of the total.

The change in housing expenditures was due in part to real improvements in the level of housing and larger expenditures. Some of the increase, however, resulted from changes in survey techniques during the period.

The biggest increase was in the amount spent on automobiles—up from 12 to 16 per cent.

Expenditures for clothing have been declining for several years as a proportion of total spending. In 1955 some 14 per cent of family spending went for clothing; in 1961 the figure was 12 per cent.

Families with incomes under \$1,000 spent an average of \$2,002 for current consumption; families with incomes of \$15,000 and over spent \$7,949. Low-income families obviously were going into debt or drawing on savings. (13)

## Good News for the Diet Conscious: Peanuts Coming Down in Calories

The peanut butter sandwich is on the comeback trail after falling out of favor for a few years after World War II.

We are, in fact, eating an extra pound and a half of peanuts in all forms these days, compared with 10 years ago. In 1955 we averaged 5.8 pounds of peanuts a person; today we are eating 7.3 pounds.

However, we still don't eat as many peanuts as we did in 1945, the wartime peak, when we averaged 9.5 pounds per person.

Peanut butter is easily the favorite way of eating peanuts. On the average, we eat three and a half pounds of peanut butter a year, about 25 per cent more than we did 10 years ago.

And if the scientists and manufacturers have their way, we'll be eating even more peanut butter in the future. The trade is devoting considerable energy to providing an improved peanut butter to tempt the shopper.

We are tossing down a few more salted peanuts these days, too—1.5 pounds a person, a fifth of a pound more than the 1955 average of 1.3 pounds.

Manufacturers are taking steps to insure the popularity of their product. The steps, in general, have led them toward peanuts that have been trimmed of some of their calories. In recent years, the industry introduced dry-roast peanuts, which boast fewer calories than oil-roast nuts and presumably appeal to the diet-conscious consumer.

An even more drastic attack on calories has been developed recently by USDA's Agricultural Research Service. The process removes 80 per cent of the oil content and 75 per cent of the calories but leaves intact the original flavor and high protein content. Once processed, the peanuts can be used in many of the same ways

as ordinary peanuts.

Aside from peanut butter and salted peanuts, we eat about 1.2 pounds of peanuts a year in the form of candy—in nut rolls, chocolate bars, chocolate-covered peanuts, peanut bars and peanut brittle. That's a fifth of a pound more than we ate in 1955.

And there is another half pound of peanuts that are roasted in the shell, the ball-park peanuts that also show up at the circus, the zoo or the county fair.

The remaining half pound of nuts that figure in the 7.3 pounds total are eaten on the farm.

While harvested acreage has changed little in recent years, yields per acre have more than doubled since 1947 to a record 1,569 pounds in 1964. (17)

## French Fries, Ready in the Freezer, Bounding up the Scale of Popularity

A curiosity in the '30s, a luxury in the '40s, a nationwide novelty in the '50s, and a sevenfold success from then to now—that is the history of the frozen french fried potato.

Frozen french fried potatoes make up about 90 per cent of all frozen potato products. And per capita use of such products has increased an average of 25 per cent a year over the last decade. Topping that performance, consumption per person in 1964 was up 30 per cent over the previous year, totaling seven times greater than it was in the mid-'50s.

Frozen potatoes now account for about 10 per cent of all the potatoes we eat.

But a good part of their popularity has been gained at the expense of fresh potatoes. Consumption of fresh potatoes dropped more than 20 per cent during the past decade and, according to preliminary estimates, per person use in 1964 was at an alltime low.

Production of all frozen potato products amounted to 1.1 billion pounds in 1964. (18)

COSTS OF GRAIN ELEVATOR OPERATION IN THE SPRING WHEAT AREA. W. L. Trock, Montana Agricultural Experiment Station, in cooperation with the Farm Production Economics Division. Mont. Agr. Expt. Sta. Bul. 593.

This bulletin presents information about such things as the effects of size on costs, the relationship of sideline enterprises to the grain storage and merchandising enterprise, and the effects of varying levels of storage facility use on costs for typical country elevators in the spring wheat area.

ENTERPRISE COSTS AND RETURNS FOR BEEF CATTLE—SOUTHWESTERN LOUISIANA RICE AREA. A. R. Gerlow and J. R. Campbell, Farm Production Economics Division, in cooperation with the Louisiana Agricultural Experiment Station. La. Agr. Expt. Sta. D.A.E. Res. Rpt. 337.

It is the objective of this study to present and analyze information pertaining to cattle operations for a better understanding of current production practices, costs and associated returns presently existing in the area. The analysis also includes an economic evaluation of some of the improved production practices that are usually recommended to cattlemen in the area.

AN ECONOMIC STUDY OF THE EASTERN BEET SUGAR INDUSTRY. R. A. Young, Michigan State University Agricultural Experiment Station, in cooperation with the Marketing Economics Division. Mich. Agr. Expt. Sta. Res. Bul. 9.

The outlook for the next five years for sugar beet growers in the Eastern (or Great Lakes) region appears to be a period of relatively favorable returns to beet production. Technological advances are reducing costs and inconveniences and are eliminating variability of returns in beet production. (See May 1965 Farm Index.)



## recent publications

*The publications listed here are issued by the Economic Research Service and cooperatively by the state universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from The Farm Index, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained only by writing to the issuing agencies of the respective states.*

SCOURING, BALING AND TRANSPORTING WESTERN WOOLS—PRACTICES, PROBLEMS, POSSIBILITIES. A. D. Jones, Marketing Economics Division, and H. A. Richards, Texas Transportation Institute, in cooperation with the Farmer Cooperative Service. MRR-723.

Results of this study indicate that transportation costs for moving western wools to the mills can be reduced. Installation of permanent baling facilities for grease wool appears advisable except in the smallest warehouses. Scouring western wools locally does not appear advisable unless the scouring is performed to specification for established trade interests. (See November 1964 Farm Index.)

COST OF STORING SEED COTTON. Z. M. Looney and others, Market-

ing Economics Division. MRR-712.

When a ginner is faced with the handling and unloading of seed cotton in excess of his plant's ginning capacity, he needs some guide for determining whether he should provide seed cotton storage facilities or adjust his ginning rate more closely to the harvesting rate by some other means. This report compared the costs of establishing and operating three specific types of seed cotton storage facilities with the costs of increasing gin handling capacity by building new plants or modernizing existing plants. (See July 1965 Farm Index.)

ESTABLISHING CENTRAL SCHOOL LUNCH KITCHENS IN URBAN AREAS: PROBLEMS AND COSTS. R. B. Reese, Marketing Economics Division. AER-72.

Several thousand older urban schools are not participating in the National School Lunch Program because installation of kitchen and dining facilities is not feasible. This report shows how a food service system involving central food preparation and distribution could provide a solution to this problem. (See June 1965 Farm Index.)

MILK AND MILK PRODUCTS IN THE NATION'S SCHOOLS. W. H. Freund and R. B. Reese, Marketing Economics Division. MRR-716.

The marketing of increasing quantities of milk through schools has contributed to stabilization of the fluid milk market during the past decade. Looking to the future, it appears that the expansion of the school milk market is inherent in the continuing growth of the school population. Substantial gains also could result from increased use of morning and afternoon milk breaks in the more than 45,000 schools where milk is offered only once during the day. (See July 1965 Farm Index.)

SELECTED STATISTICAL SERIES FOR POULTRY AND EGGS THROUGH 1964. R. J. Irvin and B. H. Carr, Economic and Statistical Analysis Division. ERS-232.

This report supplements the Poultry and Egg Situation, a report issued periodically by the Economic Research Service. It augments and replaces many of the historical series previously carried in the situation report.

BUTTERFAT SAMPLING AND TESTING PROBLEMS: A NINE-MARKET STUDY. L. F. Herrmann and E. D. Anderson, Marketing Economics Division. Tech. Bul. 1336.

Most of the milk sampling methods now in use were developed without the benefit of the statistical tools that are available today. This report applies to the problems of sampling and testing milk for butterfat content some of the simpler statistical methods in use today, including measures of dispersion, analysis of variance and regression analysis.

RAILROAD FREIGHT RATE INDEXES FOR FARM PRODUCTS, 1957-63. H. V. Smith, Marketing Economics Division. Statis. Bul. 358.

The basic purpose of this freight rate index is to measure the average change from year to year in the price paid for transporting agricultural commodities from the point of origin to processing or marketing destinations.

### Co-ops Count

—More than 21.5 million people belong to all types of rural cooperatives.

—The value of farmers' investment in cooperatives now amounts to over \$5 billion.

—The 8,900 marketing, farm supply and service cooperatives do a total net business of about \$14 billion a year.

In recognition of the contribution cooperatives have made to the welfare of the farmer, the consumer and the national economy, Secretary of Agriculture Orville L. Freeman has announced a five-day program of activities in Washington, beginning October 4, to initiate the nationwide celebration of October as Cooperative Month.

The Department of Agriculture, Secretary Freeman said, is placing special emphasis on the contribution of cooperatives to high quality consumer goods and services, job opportunities, credit, supply and technical services for farmers. (26)

THE MARKET FOR FOOD IN THE NATION'S SCHOOLS. M. Kriesberg, Marketing Economics Division. MRR-702.

The nation's schools provide an important and rapidly expanding market for agricultural products. During 1962-63, the school food outlet accounted for about \$1 billion in foods. Expansion in school population alone could result in an increase of as much as 25 per cent in this market during the next decade. (See December 1964 Farm Index.)

AGRICULTURE IN PAKISTAN. W. F. Hall, Foreign Regional Analysis Division. ERS-For. 129.

Pakistan's chief agricultural production goals are self-sufficiency in output of food grains for its growing population and expanded outturn of raw materials for the domestic industry and for export. A fairly rapid rate of economic growth has been projected for Pakistan over the next decade.

URBAN AND RURAL LEVELS OF LIVING: 1960. J. D. Cowhig, Economic and Statistical Analysis Division. AER-79.

Information on five indicators of level of living (availability of automobile, telephone, hot and cold water piped inside the house, a house in sound condition and a person-per-room ratio) was used to compare the levels of living of the urban and rural populations in 1960. (See August 1965 Farm Index.)

ALGERIA'S AGRICULTURAL ECONOMY IN BRIEF. C. Santmyer, Foreign Regional Analysis Division. ERS-For. 131.

Internal strife during the past decade has been an important factor in holding Algeria's agricultural growth below that of most other countries in North Africa. Extensive nationalization of property precipitated a general loss of skilled manpower which has reduced industrial as well as agricultural production.

### Numbers in parentheses at end of stories refer to sources listed below:

1. W. D. Goodsell, Farm Costs and Returns: Commercial Farms by Type, Size, and Location, 1965 (M); 2. D. S. Moore and R. H. Rogers, Production and Production Requirements, Costs and Expected Returns for Crop Production on Well-Drained Clay and Clay Loam Soils, Coastal Prairie of Texas, Tex. Agr. Expt. Sta. MP-756 (P\*); 3. H. G. Sitler, Costs of Selected Sizes and Types of Farm Machinery on Colorado Wheat Farms, Colo. Agr. Expt. Sta. Unnumb. (P\*); 4. E. J. Partenheimer and P. L. Strickland, Jr., Optimum Farm Organization with Different Livestock Prices, Limestone Valley Areas of Alabama, Ala. Agr. Expt. Sta. Bul. 357 (P\*); 5. C. R. Twining and P. L. Henderson, Promotion Activities of Agricultural Groups (M); 6. H. H. Harp, Economics of Alternative Uses for Potatoes in the United States (S); 7. G. B. Rogers (SM); 8. National Food Situation, NFS-113 (P); 9. D. D. Steward and F. A. Coffey, "Role of Fertilizer in Agricultural Production," Chapter III, United Nations Manual on World Use of

- Fertilizer (M); 10. Demand and Price Situation, DPS-105 (P); 11. R. E. Kampe, The Agricultural Economy of Lebanon ERS-For. 138 (M); 12. T. Q. Hutchinson (SM); 13. W. Anderson, Trends and Developments Affecting U.S. Agricultural Trade with Europe (S); 14. Livestock and Meat Situation, LMS-143 (P); 15. R. C. Lifquist (SM); 16. Agricultural Research Service, Consumer Expenditures and Income: Rural Farm Population, United States, 1961, USDA Cons. Surv. Rpt. 5 (P); 17. Fats and Oils Situation, FOS-228 (P); 18. D. S. Kuryloski, "Frozen Potato Pack and Use," Veg. Situa., TVS-156 (P); 19. USDA Press Release-USDA 2117-65; 20. S. C. Saunders and F. E. McVey (SM).

Speech (S); published report (P); unpublished manuscript (M); special material (SM); \* State publications may be obtained only by writing to the experiment station or university cited.

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### *The Omnipresent Soybean*

What is it that began as a fertilizer and wound up as a food?

A soybean—which few of us would recognize if we saw it.

Yet this small bean appears in many food products we use each day—mayonnaise, salad and cooking oils, margarine, sandwich spreads, candies, frozen desserts and high-protein, low-fat liquid foods that weight-conscious Americans consume in hundreds of gallons each year.

Only a short time ago, farmers planted soybeans after they harvested their crops, then ploughed the lush green rows into the soil to fertilize the ground for their next year's crops. The leaves and roots still go into the ground in many cases—but not the beans.

Soybean oil not only goes into foods, it goes into soaps and shaving creams; paints, varnishes and lacquers; insecticides and disinfectants; printing inks; pharmaceuticals and vitamins; leather dressings and linoleum; electrical insulations; putty and dozens of other products we use every day.

What's good for people is also good for animals. Cattle and poultry, fish and pets keep healthy with feeds fortified with protein largely from soybean meal. The finest fox and mink furs worn by style-conscious women come from animals that eat foods rich in soybean meal.

In 1964, U.S. farmers harvested about 700 million bushels of soybeans for which they received \$1.9 billion. Of the 1964 total soybean production, 205 million bushels went overseas as beans, 2 million tons as meal and 1.3 billion pounds as oil. (27)

# THE FARM INDEX

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